List of Contents

NUMBER 1

E. Y. Rodin	1	Speed of publication—An editorial
A. Shastri	3	Minimal regular graph containing a given graph
M. Witten and **W. Satzer**	7	Gompertz survival model parameters: Estimation and sensitivity
A. Chakrabarti	13	Obliquely incident water waves against a vertical cliff
A. Carbone	19	Approximation results and fixed points
A. S. Abd El-Rady	23	A modified integral inequality in n-dimentional Euclidean space
I. K. Argyros	27	Approximating Newton-like procedures
K. J. Bunch and **R. W. Grow**	31	The use of extrapolation for calculating elementary transcendental and Bessel functions
J. Shen	35	Projection methods for time-dependent Navier-Stokes equations
J.-C. Yao	39	Variational inequality
K. Venugopal and **S. S. Keerthi**	43	The approximate parametrization of the curve of intersection of implicit surfaces
A. B. Kut'in	47	Complexity of preprocessing of recursive filters for running in parallel
J.-C. Yao	51	General variational inequalities in Banach spaces
J.-S. Guo and **J.-C. Yao**	55	Zeros of operators in Banach spaces
M. Guedda, D. Hilhorst and **C. Picard**	59	The one-dimensional porous medium equation with convection: Continuous differentiability of interfaces after the waiting time
G. P. Klimov	63	Stationary renewal processes
E. Comay	67	Errata to "Stability problems of numerical solutions to the Lorentz-Dirac equation"

W.-B. Gong, J. Pan and **C. G. Cassandras**	69	Obtaining derivatives of stationary queue length probabilities through the matrix-geometric solution method
G. Behforooz	75	Approximation of Cauchy principal value integrals by piecewise Hermite quartic polynomials by spline
A. W. McInnes	79	Formulation of the integral form for integral function approximations
A. W. McInnes	83	Degeneracies of the integral form for integral function approximations
I. Efrat	87	Sensitivity analysis for semiconductor simulations
A. G. Ramm	91	Stability of the solution to inverse scattering problem with exact data
H.-J. Meier and **J. Novotný**	95	A stochastic approximation problem in mobile radio communication
P. Colli and **M. Grasselli**	99	An existence result for a hyperbolic phase transition problem with memory

NUMBER 2

E. Y. Rodin	1	Speed of publication—An editorial
V. Pan	3	Extended concept of significant digits and lower precision computations
J.-C. Luo	7	A study on basis conjugate matrices
G. Adomian and **R. Rach**	11	Inhomogeneous nonlinear partial differential equations with variable coefficients
H. K. Kuiken	13	Higher approximations to the solution of a problem concerning a high-pressure gas-discharge arc
E. Triesch	19	A short proof that matching matroids are transversal
H. Saitoh, S. Owa, T. Sekine, M. Nunokawa and **R. Yamakawa**	21	An application of a certain integral operator
R. U. Verma	25	Role of numerical range in approximation-solvability of nonlinear functional equations

V. Dolezal	29	A remark on invertibility of Hammerstein-type operators
G. D. Tsiotras	33	Closed-form expected queueing times of a tandem system with finite intermediate buffer: A recursive approach
K. A. O'Neil and **R. A. Redner**	37	Limiting cumulants of *U*-statistics
A. G. Ramm and **A. I. Katsevich**	41	Inversion of incomplete Radon transform
A. G. Ramm	47	Inversion of limited-angle tomographic data II
A. Klarbring, A. Mikelić and **M. Shillor**	51	Optimal shape design in contact problems with normal compliance and friction
M. Hermann and **K. Ullrich**	57	RWPKV: A software package for continuation and bifurcation problems in two-point boundary value problems
H. -G. Roos	63	The direct computation of the quasi-stationary temperature field for heat conduction problems with periodically oscillating temperature fields
W. J. Layton and **P. J. Rabier**	67	Domain decomposition via operator splitting for nonsymmetric problems
T. Inoue	71	A characterization of weighted Chebyshev constant
J.-C. Luo	75	A note on parallel processing
J. Rokne	79	A characteristic polynomial
P. L. Butzer and **M. Hauss**	83	Riemann Zeta function: Rapidly converging series and integral representations
J. A. Adam	89	Solution uniqueness and stability criteria for a model of growth factor production
G. Caginalp	93	Penrose-Fife modification of solidification equations has no freezing or melting
A. Rèpaci	97	Computing of the heat diffusion coefficient for the nonlinear heat equation by boundary value measurements

NUMBER 3

E. Y. Rodin	1	Speed of publication—An editorial
A. Dress and **M. Steel**	3	Convex tree realizations of partitions
C. W. Chan	7	Knowledge acquisition by conceptual modelling
R. H. Warren	13	Optimal arcs for the traveling salesman problem
E. B. Hansen and **M. A. Kelmanson**	15	Integral equation analysis of the driven-cavity boundary singularity
G.-G. Gao	21	Divisibility properties of a Fibonacci-like sequence
M. J. Kaiser and **T. L. Morin**	25	Locating an obnoxious facility
G. Liao and **J. Su**	27	Grid generation via deformation
F. J. Dodd and **H. A. Donegan**	31	Comparative and compound consensus
J.-S. Guo and **J.-C. Yao**	35	Extension of strongly nonlinear quasivariational inequalities
A.-M. Wazwaz	39	Sequences of series
A. Novick-Cohen and **L. A. Peletier**	45	The steady states of the one-dimensional Cahn-Hilliard equation
M. K. Ghosh and **L. Debnath**	47	Approximation of the fixed points of quasi-nonexpansive mappings in a uniformly convex Banach space
D. Chen	51	Ostrowski-Traub nonlinear iterative methods are not optimal in the sense of s-order of convergence
S. A. Maggelakis	53	The effects of tumor growth factors on the growth rate of cell cultures
Y.-R. Ou and **J. A. Burns**	57	Optimal control of lift/drag ratios on a rotating cylinder
B. G. Fitzpatrick and **J. W. Gebbie**	63	A fourth order scheme for nonlinear integral equations of viscoelasticity
A. L. Andrew, K. W. E. Chu and **P. Lancaster**	69	Sensitivities of eigenvalues and eigenvectors of problems nonlinear in the eigenparameter
R. Saxton	73	Formation of singularities for a class of nonlinear, hyperbolically degenerate initial-boundary value problems

A. I. Katsevich and **A. G. Ramm**	77	Filtered back projection method for inversion of incomplete tomographic data
J.-C. Yao	81	The unification of the calculus of variations and the theory of nonlinear operators in Banach spaces
D. Ventura, A. Gnudi, G. Bacarani and **F. Odeh**	85	Multidimensional spherical harmonics expansion of Boltzmann equation for transport in semiconductors
L. Pandolfi	91	The Hankel singular values of a distributed system
T. A. Gulliver and **V. K. Bhargava**	95	Self-dual codes based on the twin prime product 35
P. Dmitruk, A. Saúl and **L. G. Reyna**	99	High electric field approximation to charge transport in semiconductor devices

NUMBER 4

E. Y. Rodin	1	Speed of publication—An editorial
I. V. Andrianov	3	Laplace transform inverse problem application of two-point Padé approximant
D. Chen and **I. K. Argyros**	7	The midpoint method for solving nonlinear operator equations in Banach space
M. Aslam Noor	11	An iterative algorithm for nonlinear variation inequalities
A. Tornambè and **P. Valigi**	15	A PID controller for the robust stabilization of SISO linear systems
B. Chen	19	Finite convergence of nonsmooth equation based methods for affine variational inequalities
L. Abolnikov and **J. H. Dshalalow**	25	Ergodicity conditions and invariant probability measure for an embedded Markov chain in a controlled bulk queueing system with a bilevel service delay discipline Part 1
T. J. Laffey and **E. Meehan**	29	Factorization of polynomials using nilpotent Jordan blocks
H. Hammouri and **S. Othman**	35	A remark on Lagrange stability of nonlinear systems stabilization

G. Yin and B. G. Fitzpatrick	41	Almost sure convergence in distributed parameter identification algorithms under correlated noise
K. K. Nambiar, P. K. Varma and V. Saroch	45	An axiomatic definition of Shannon's entropy
L. Lopez	47	The invertibility of a class of tridiagonal matrices
G. P. Klimov	53	Remark on the theorem of Stone
E. C. Cho	55	Dihedral angels of n-simplices
J.-S. Guo and Y.-M. Kung	59	Generalized variational inequalities for multivalued operators with contractible values
A. G. Ramm	63	Inverse scattering with fixed-energy data
B. Codenotti and L. Margara	69	Traveling Salesman Problem and local search
A. I. Katsevich	73	Algorithm for recovering discontinuities of a function from its radon transform
J.-C. Luo	77	Analysis of round-off errors
J. Pusz and J. Wesolowski	81	A non-Lukacsian regressional characterization of the Gamma distribution
D. Yevick, M. Glasner and B. Hermansson	85	Generalized Padé approximants—Application to split operator alternating direction implicit finite difference and finite element techniques
A. G. Ramm and A. I. Zaslávsky	91	Inversion of incomplete cone-beam data
D. Sheen	95	A generalized Green's theorem
R. Klein and L. Ting	99	Vortex filament with axial core structure variation

NUMBER 5

E. Y. Rodin	1	Speed of publication—An editorial
S. K. Lee and S. Owa	3	A subclass of p-valently close-to-convex functions of order α
N. S. Papageorgiou	7	Maximal elements for non-ordered preferences
S. A. Maggelakis	11	Effects of non-uniform inhibitor production on the growth of cancer cell cultures

L. Abolnikov and **J. H. Dshalalow**	15	Ergodicity conditions and invariant probability measure for an embedded Markov chain in a controlled bulk queueing system with a bilevel service delay discipline Part II
J. Chattopadhyay and **P. K. Tapaswi**	19	Morphogenetic prepattern during embryonic development—A nonlinear analysis
S. Rashid	23	A direct proof of purification for Schmeidler's theorem
M. Aslam Chaudhry and **S. M. Zubair**	25	Remarks on the Whittaker functions
C. Bu	31	An initial-boundary value problem for the Ginzburg-Landau equation
Y.-J. Peng and **D. Serre**	35	Non-consistance du schéma de Glimm pour le système des câbles elastiques
G. Adomian and **R. Rach**	39	An approach to steady-state solutions
G. P. Klimov	41	A solution of the equation $w = w * F$ where F is a probability measure on $\mathbf{R}^d$
D. Serre	45	Répartition asymptotique des racines d'une suite de polynômes
F. C. Difilippo and **R. B. Perez**	51	Application of a new integral representation of the K_0 Bessel function
H. A. Farhat and **J. C. Birget**	55	Circuits over monoids: A fault model, and a trade-off between testability and circuit delay
C. Cercignani	59	A remarkable estimate for the solutions of the Boltzmann equation
A. B. Philpott and **A. I. Mees**	63	Continuous-time shortest path problems with stopping and starting costs
J.-C. Yao	67	Nash equilibria in N-person games without convexity
G. A. Latham and **R. S. Anderssen**	71	A hyperplane approach to the EMS algorithm
J.-C. Luo	75	A proof in favor of block-based procedure
C.-L. Li	79	Dynamic programming approach to the $n/m/$parallel/$\sum_{i=1}^{m}\{\sum w_j \sum t_j\}$ scheduling problem
J.-C. Yao and **T. C. Huang**	81	Surjectivity of operators in Banach spaces

A. G. Ramm and **P. D. Stefanov** 87 A three-dimensional Ambartsumian-type theorem

S. Sundar, P. Prasad and **R. Ravindran** 89 A case study with the new theory of shock dynamics

NUMBER 6

E. Y. Rodin 1 Speed of publication—An editorial

G. N. Gorelov and **V. A. Sobolev** 3 Duck-trajectories in a thermal explosion problem

G. Ramanaiah and **G. Malarvizhi** 7 A note on the solution of a class of two-point boundary value problems involving a mixed boundary condition

P. A. Mishnaevskii and **A. G. Ramm** 11 A uniqueness theorem for a Goursat-type problem

A. G. Ramm 15 Numerical solution of 3D inverse scattering problems with noisy discrete fixed-energy data

E. Fernandez, T. L. Herdman and **J. Turi** 19 The computation of the adjoint generator for a singular neutral equation

G. J. Habetler and **C. N. Haddad** 25 Global stability of a two-species piecewise linear Volterra ecosystem

G. Adomian and **R. Rach** 29 Modified decomposition solution of nonlinear partial differential equations

R. S. Kubrusly 31 A direct dual method for nonlinear eigenvalue inequalities

M. A. Seoud 37 Total chromatic numbers

K. Tomoeda and **T. Nakaki** 41 Difference approximations to interface curves for nonlinear diffusion equations with absorption

V. Pan 49 Improving the solution of the symmetric eigenvalue problem and an extension

H. Q. Yang, Y. Hua and **J. D. Jones** 51 A general method for calculating functions of fuzzy numbers

J. P. Boyd 57 Defeating the Runge phenomenon for equispaced polynomial interpolation via Tikhonov regularization

K. K. Nambiar, P. K. Varma and V. Saroch	61	A graph-theoretic proof of Arrow's Dictator Theorem
M. A. Steel, M. D. Hendy, L. A. Székely and P. L. Erdős	63	Spectral analysis and a closest tree method for genetic sequences
M. K. El-Daou and E. L. Ortiz	69	A note on accurate estimations of the local truncation error of polynomial methods for differential equations
R. E. Miller	73	Extension theorems for homogenization on lattice structures
K. L. Teo, A. Cantoni and X. G. Lin	79	A nonsmooth optimization problem in envelope constrained filtering
P. L. Butzer, M. Hauss and M. Leclerc	83	Bernoulli numbers and polynomials of arbitrary complex indices
H. J. Hamilton and J. M. Dyck	89	IIPS: A framework for specifying inductive-inference problems
R. P. Srivastav	95	Computing the singular behavior of solutions of the Cauchy singular integral equations
O. Penrose and P. C. Fife	99	Comment on G. Caginalp's paper "Penrose-Fife modification of solidification equations has no freezing or melting"